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ABSTRACT

A study of the acquisition of Turkish and German by immigrant children in West Germany addressed three issues: (1) the role of cognitive development and age of learning in the process of language acquisition, (2) the role of transfer between languages, and (3) the effects of greater or lesser contact with native speakers of the two languages being acquired. The examination focused on the nominal reference system characterized by plurifunctionality and syncretism. Data were drawn from two cross-sectional studies of bilingual immigrant children in West Berlin in which the sociopolitical setting is considered along with the psycholinguistic investigation. The age groups were 8-15 years and 5-12 years. Monolingual German and Turkish control groups were used in the second study. The children's production of definite and indefinite markers during lengthy interviews using a variety of psycho- and sociolinguistic methodologies was analyzed. The data suggest that, while the individual learner's approach to plurifunctional items is systematic, individual interlanguage systems differ from each other. Further research into the points at which the various functions of plurifunctional items become the focus for individual learners is recommended. (MSE)

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The Problem of Plurifunctionality in Bilingual Language Acquisition

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1. Background One of the central problems for language acquisition research is to discover how the meaning and distribution of grammatical morphemes (inflections and function words) are acquired. Not only do these morphemes frequently represent concepts not directly perceptible in the "here and now", but the forms they take frequently are characterized by plurifunctionality and syncretism.

Turkish and German, two languages now being acquired sequentially or simultaneously by immigrant children in the Federal Republic of Germany and West Berlin are both characterized by plurifunctionality, though the specifics of the two systems differ greatly in detail (see below).

The study addresses the following issues:
(1) the role of cognitive development and age of learning in the process of language acquisition (comparison of sequential with simultaneous acquisition) L1/L2; (2) the role of transfer between languages. The influence of Turkish on German and German on Turkish structures; (3) the effects of greater or lesser contact with native speakers of the two languages being acquired.

The present paper focuses on the linguistic effects on grammatical markers on the nominal reference system which are characterized by plurifunctionality and syncretism and draws on the results of two cross-sectional studies of bilingual immigrant children in West Berlin in which I am attempting to integrate sociolinguistic investigation of the effects of the language acquisition setting, with the more traditional psycholinguistic goal of discovering how the meaning and distribution of grammatical morphemes are acquired.

The first study of 48 Turkish (and 30 Greek) school children 8-15 years old, was designed to obtain an overview of language proficiency and communicative competence in German (Pfaff/Portz 1981, Pfaff 1984, Portz/Pfaff 1981).

The second study, "the EKMAUS study" for which data collection is still in progress, involves 80 Turkish/German bilingual children 5-12 years old plus Turkish and German monolingual control groups. The bilingual groups are defined in terms of age of onset of second language acquisition and extent of contact with native speakers of German. Bilingual group A: bilingual children born in Germany (or immigrated very young) with little contact with native German peers. (n=30). Bilingual group B: bilingual children born in Germany (or immigrated very young) with considerable contact with native German peers (n=30). Bilingual group C: bilingual children born in Turkey, immigrated to Germany after two or more years of school in Turkey (n=20). Control group D: monolingual Turkish children of comparable social background, interviewed in Ankara (n=15). Control group E: monolingual German children of comparable social background, interviewed in Berlin (n=15).

The sociopolitical setting, which determines the framework

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of language socialization and acquisition is discussed in Pfaff 1981 and Pfaff 1984 a. I will simply note here that the population includes children for whom language development takes place in a clear sequence: L1 Turkish, acquired in the family followed by L2 German, acquired primarily at school, children who acquire both Turkish and German simultaneously within and outside the family from the outset; and still other children who are German dominant, having lost (or never acquired) competence in aspects of Turkish. The linguistic input is thus highly variable and includes several different types of nonstandard and learner varieties spoken by other children and adults, as well as standard and colloquial dialects.

In the following sections, I briefly sketch the research goals and hypotheses, the methodologies and a few of the results which bear on issues of plurifunctionality.

2. Hypotheses: Plurifunctionality in Nominal Reference in Turkish and German. Plurifunctionality is here understood in two senses, also distinguished by Karmiloff-Smith (1979:50-53): "First that a word may take on any one of its several functions... Second ..., plurifunctionality can imply the simultaneous expression of several different functions".

Plurifunctionality of the first type exists in both Turkish and German for the numeral 'one'/indefinite article 'a' as in (1):

(1) bir araba/ ein Auto 'one car/a car'

For both languages, we would predict the effect found by Karmiloff-Smith 1979 for French, that children pass through a stage in which the numeral function dominates in first language acquisition and simultaneously bilingual acquisition (Groups D,E,B): Whether or not the same pattern is observed in second language acquisition, particularly where it begins relatively late (Group A, and, especially, Group C), will decide between a strong form of the "identity hypothesis (L2=L1) which predicts that language development processes are parallel in L1 and L2 and a model which predicts that later L2 acquisition procedes along different lines, reflecting the learners' more advanced cognitive development.

Plurifunctionality of the second type is exemplified by the pronoun and article forms in German and by the definite accusative inflection in Turkish.

In German, case number and gender are fusionally expressed, primarily by the definite and indefinite article forms listed. The system is further characterized by a high degree of syncretism, so that forms can have various meaning, for instance: die is both nominative and accusative feminine singular and general plural, der is nominative masculine singular, dative and genetive of feminine singular and genetive of general plural. Den is both accusative of masculine singular as well as dative for general plural. This syncretism, combined with the fact that the grammatical gender assignment is generally unpredictable in either phonological or semantic terms, makes this system difficult for children to acquire. Studies of German first language acquisition in Mills, Slobin's cross-linguistic acquisition project show delayed acquisition relative to

other languages and it is well known as one of the major difficulties for German second language learners.

Maratsos and Chalkley 1980 suggest that German first language learners master the gender correlations of article forms before case. While this may be true for children receiving standard German input in which the correct forms for actual nouns are heard in the environment, the situation can be expected to be quite different for immigrant children who may hear German as much from other immigrants who have not learned the standard genders as from native speakers who have.

Turkish in contrast is an agglutinative language with an extremely regular phonologically conditioned system of morpheme alternations. Case and number are marked by nominal suffixes, and there is no gender -- even for third person pronouns which refer to natural gender animate nouns. Studies of the acquisition of Turkish as a first language (Aksu-Koç/Slobin 1985 and Ekmekçi 1979) have shown that the inflectional system is acquired early and with great accuracy. We hypothesize that these subsystems are stable and should be easily acquired by bilingual children whose exposure to Turkish is quantitatively less than for monolingual children, and whose Turkish input may be nonstandard in other respects. As I reported in Pfaff 1984 b this is, in general, true.

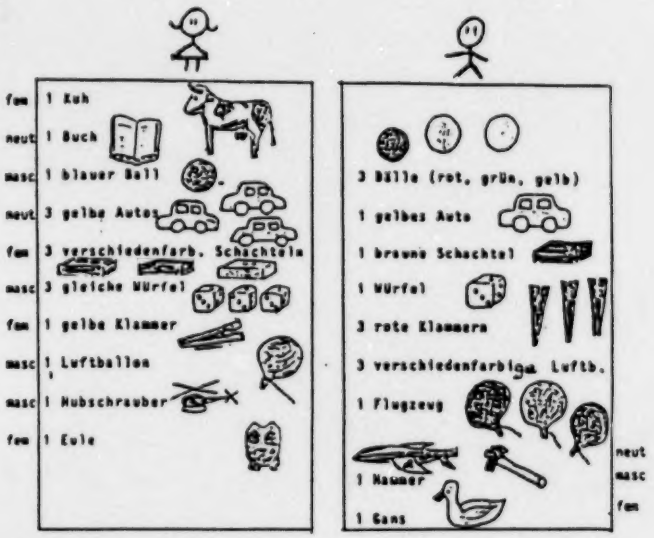
Previous acquisition studies have not, however, focused on acquisition of some of the less transparent aspects of Turkish nominal reference system, for example that the accusative inflection occurs only on definites, that definiteness is inflectionally marked only in the accusative case. Here we might expect the contact with German to play a role - leading to convergence toward a uniform expression of definiteness in non-accusative as well as accusative frames, or to the spread of accusative marking to indefinite as well as definite reference.

3. Methodology. To investigate these, among other, questions, the EKMAUS study employs a variety of psycho- and sociolinguistic methodologies, incorporated into a 1 1/2 - 2 hour interview, conducted with individual children in each language in separate sessions, in their kindergartens or after-school day care centers. The interviews include free conversation, focused on the children's sociolinguistic background and daily activities: language use, orientation to Turkey or Germany, contact with native speakers of both languages, a series of structured experimental games with toys adapted from Karmiloff-Smith 1979, interspersed with stories and elicited personal narratives, adapted from Pfaff & Portz 1981.

In the rest of this paper, I report some of the results of two of the games, PLAYROOMS and ACTIONS. PLAYROOMS elicits production and comprehension of definite and indefinite forms to one of unique (1/1) similar (1/3s) or identical (1/3i) toys or to all three identical toys (3/3i) which belong to a girl and boy doll who are present but not looking at their toys and willing to lend them in response to explicit verbal requests from the child (production) or the interviewer (comprehension). To investigate case/gender/

number marking, the toys are selected to represent standard German grammatical gender classes, e.g., masc. (Ball, 'ball'; Hubschrauber, 'helicopter'), fem. (Kuh, 'cow'; Schachtel, 'box'), neut. (Auto, 'car'; Flugzeug, 'airplane'), as shown below.

PLAYROOMS



Variables investigated

Production
1. Determiner usage for visible objects in 4 contexts: 1/1 unique, 1/3s similar, 1/3i identical, 3/3i identical
2. Redundant vs. necessary modification
3. Grammatical gender
4. Natural gender

Comprh.
1. Reaction to definite vs. idenfinite determiner
2. (German version) den and das vs. die
3. Explanation:pragmatic vs. metalinguistic

ACTIONS is a production and comprehension game played with sets of toys, in which girl and boy dolls act on and with a set of various objects, animals and other human dolls, again with unique (1/1), similar (1/3s) and identical (1/3i) participants. In each set, there are several series of actions involving the participants; the actions become increasingly complex as indicated by the example German sentences and glosses. The letters a,b,c,d refer to the patterns of distribution of definite articles in German, to be discussed in the results section.

4. Results. The results from bilingual children (Group A) for PLAYROOMS, definite and indefinite marking, in both Turkish and German

are similar to Karmiloff-Smith's findings for French monolinguals.

Production. While all of the children produced definite markers in most of the appropriate contexts, there were several children who used no indefinite/numeral 'one' forms in their spontaneous production -- about 1/3 of the Turkish interviews contained no bir or bir tane N, about 1/2 of the German interviews contained no form of ein in the PLAYROOM production task. Nontheless, from the instances that do occur, there is ample evidence for the primacy of the numeral function over the non-specific reference to one of a larger set. This is particularly clear in rare examples such as (2) and (3) where the forms are used to refer to unique items: (2) bir tane helikopter 'one helicopter' (1Aw7D); (3) ein Kuh 'a/one cow' (4Bum12T) or with a color adjective to refer to one of three similar toys as in (4): (4) bir tane yeşil topu 'the one green ball' (3Iw11T) where the noun topu is also marked as a definite accusative.

There is, however, also evidence that the indefinite meaning, one of several, plays a role as well, as their frequency is much greater in the expected context, to refer to one of three identical toys, as in (5) - (7): (5) bir tane mandal 'one clothespin' (3/4Cm 10/1LD); (6) mandalini -- bir tane 'your clothespin -- 'one' (MHm 10); (7) den Auto, einer von dieser drei 'the car, one of these three' (5Mm11D).

Comprehension. There is much more evidence from the comprehension task, where all of the children were presented with sentences containing the crucial forms: bir N -- in Turkish and ein (eine, einen) N in German.

Definite forms like topu und den Ball 'the ball' were correctly interpreted with very few exceptions; children chose the girls' room with exactly one ball and gave justifications like 'she has one, he has three' in response to our question 'how do you know?'

Indefinite forms like bir top and einen Ball 'a ball', on the other hand, were frequently misinterpreted; children again chose the girl's room and their justifications as in (8-10) again refer to number - clearly showing the primacy of the numeral over the indefinite article function: (8a) bir tane, onun cok var, bunun bir tane 'one that has lots, this has one' (3/4C10/11D); (9b) Karin weil er nur einen Ball hat 'K. because he has only one ball' (5MY11D); (15c) weil Susi den Ball hat ... Susi hat nur einen Ball 'because Susi has the ball ... Susi has only one ball (5N21OD).

Note that in the second German example in (15), the child herself clearly does not use ein to refer to a singleton set -- she appropriately uses the definite article, den.

Finally, to return to the comprehension of German definite article forms, I want to make one last point about the infrequent incorrect choices mentioned earlier. The two forms den and das are consistently correctly interpreted as referring to singulars by all but the youngest children, and most refer to the singleton set in

their justification for their choice. Some of the older children spontaneously offer metalinguistic comments about the relationship between the form of the article and the notions of singularity and plurality. Two examples are given in (11) and (12): (11) weil das nur ein Auto ist 'because das is only one car' (4Bum12T); (12) weil du die Mehrzahl nicht gebildet hast 'because you didn't form the plural' (5Mm11D).

The situation is quite different for the request with die, as in die Schachtel 'the box'. Most children recognize that die can refer to the plural and some make the false generalization that it must. Again, some of the children offer explicit metalinguistic explanations to this effect as in (13) and (14): (13) wenn man die sagt, dann ist ganz viel 'when one says die, then it's always the plural' (5Mm11D); (14) wenn es die ist, dann ist immer die Mehrzahl 'when it's die it's always the plural' (5Mm11D).

Turning next to the problem of case, number and gender marking in German, consider first the combined results for six Turkish seventh graders in Table 1.

Table 1: Case/Gender Distribution (%) for Definite Article Forms

		der	die	das	den	dem	Ø	other
SUBJECTS	std. masc. subjects: 67 (std. form der)	57%	28%	7%	0%	0%	4% Ø	3%
	std. fem. subjects: 42 (std. form die)	14%	71%	2%	-	-	12% Ø	-
	std. neut. subjects: 21 (std.) form das)	48%	38%	-	-	-	10% Ø	5%
OBJECTS	std. masc. objects: 38 (std. form den)	-	13%	5%	50%	-	29% Ø	3%
	std. fem. objects: 42 (std. form die)	-	20%	7%	47%	-	27% Ø	-
	std. neut. objects: 5 std. form das)	-	20%	20%	40%	-	20% Ø	-

With respect to gender marking, note the tendency toward correct use of der and die for masculine and feminine nouns, respectively, but that all forms occur with nouns from all three standard gender classes.

For case marking, however, we find an appropriate if overgeneralized distribution of forms: Der is used only as subject, never as object while den is never used as subject, but is by far the most frequent form with objects. Die occurs considerably more frequently as subject than as object, while the reverse is true for das. There also appears to be a higher frequency of Ø-forms for object than for subject. Thus, it is clear that contrary to the first language data cited by Maratsos and Chalkley 1980, these pupils have a more highly developed system for case than for gender.

An obvious explanation for these findings is the lack of a secure gender assignment for the nouns in question. In fact, we may question whether some of these pupils -- for there are noteable individual differences ... have acquired a gender system at all -- even for non-arbitrary natural gender items, as indicated by some

of the production responses to the ACTIONS game in which the children describe sequences acted out with a girl and a boy doll and various other figures. In (a2) we see die Mädchen 'the girl' pronominalized with er 'he' rather than sie. In (c7) and (c8) boy dolls are referred to with the definite article die rather than der. (a1) Die Anke hat die Ball genommen bei Ø Hund und die hat gebringt bei Ø Kuh und da hat die Anke hingelegt und ... 'Anke took the ball from dog and she brought it to the cow and laid it down there ... ' (a2) Die rechte Mädchen hat die Klammer genommen und - hm - die hat - hi - bei - äh genommmen und woanders gelegt - äh bei Ø Peters Ecke und hat er gelegt und da hat er gebleibt. 'The girl on the right took the clothespin and laid it somewhere else - in Peter's corner and she laid it down and stayed there.' (b3) Der Junge hat den Klammer von den Jungen ausgemacht und übergespringt und zu ein Mädchen gebringt. 'The boy took the clothespin off the (other) boy and jumped over it and brought it to a girl.' (b4) Der schwarze Haare mit Mädchen hat den gleichen Mädchen gebracht. 'The black haired girl took (the clothespin) to the same girl.' (c5) Die Auto hat das Igel geschiebt. 'The car pushed the hedgehog.' (c6) Die Igel schiebt das Auto. 'The hedgehog pushed the car.' (c7) Die Andreas hat das rote Ball von die Kuh genimmt und, äh, die große Pferd gegibt. 'Andreas took the red ball from the cow and gave it to the big horse.' (c8) Die rote Junge hat das von die Mädchen weiße Mädchen, das Klammer in seine Haare genimmt und die hat von die Mädchen gehüpft und sie hat so gegeht und die rote Kind gegibt. 'The red (haired) boy took the clothespin from the white (haired) girl's hair and he jumped over the girl and he went on and gave (it) to the red child (child in a red dress).' (d9) Ø Mädchen hat den Auto gesetzten und Ø Junge hat den Auto gesetzen. 'The girl sat on the car and the boy sat on the car.' (d10) Ø Auto hat den Igel so, hintergebringt. 'The car pushed the hedgehog back.' (d11) Den Klammer hat Ø Mädchen, ... Ø Mädchen hat den Klammer genehmt und hat es ein Junge gegeben. 'The girl took the clothespin and gave it to a boy.' (d12) Ein Junge hat den Klammer den Mädchen Haare gemacht. 'A boy put the clothespin in the girl's hair.'

The sentences on set a-d illustrate a more important point, as well, presenting evidence of individual learners' attempts to regularize and systematize the article paradigm - in several different ways.

Each one of the sets of examples under a,b,c and d is for one individual and represents what for that individual is a consistent pattern throughout the ACTIONS game. Set a. represents distributional contrast: Ø/Prep., categorical die elsewhere (1Im8D); set b. shows a functional contrast: subject der vs. other den (3Am10D) set c. shows a different functional contrast: direct object vs. other functions die (4Üw10D) and set d. shows what looks like parallel distribution: definiteness marked only on object (1Sw7D).

The extent to which such regular patterns are shared by other speakers remains for further analysis.

Conclusions. It seems, then, that the two different types of pluri-

functional markers which have been discussed have different effects. With the numeral/indefinite functions of bir in Turkish and ein in German, we find striking constancy in that there is a phase in which the numeral function is primary in both languages, exactly as reported for French monolinguals by Karmiloff-Smith, a constancy which likely reflects universals in the development of the underlying cognitive categories.

With the plurifunctionality of the German article forms, on the other hand, we find no such constancy. In the results of the ACTIONS experiment, we see individual interlanguage systems differ from each other with respect to which case roles are singled out for marked reference and which forms are used. In the PLAYROOMS experiment, we find that the plurality marking function of die becomes the focus for many children. It is very clear, however, that, examined individually, that learners' approach to plurifunctional items is systematic.

These results here represent the beginning for further analysis of the EKMAUS data. What remains to be sorted out is when the various functions of plurifunctional items become the focus for learners -- to what extent this is context dependent, that is related to the focus of the particular experimental task; to what extent there is individual variation; and how this is related to sociolinguistic variation in the learners' environments. These are the goals for subsequent analysis which I hope to report in future papers.

References

Aksu-Koç, Ayhan & Dan. I. Slobin 1985. "Acquisition of Turkish". In Dan. I. Slobin (ed.) The Cross-Linguistic Study of Language Acquisition. Hillsdale, N.J. Erlbaum.

Ekmekçi, Özden 1979. Acquisition of Turkish: A Longitudinal Study on the Early Language Development of a Turkish Child. Unpublished Dissertation: University of Texas at Austin.

Karmiloff-Smith, Annette 1979. A Functional Approach to Child Language: A Study of Determiners and Reference. Cambridge: Cambridge University Press.

Maratsos, Michael & Mary Anne Chalkley 1980. "The internal language of children's syntax: the ontogenesis and representation of syntactic categories." In K. Nelson (ed.) Children's Language, Vol. 2. New York: Gardener Press. 127-214.

Mills, Ann. "Acquisition of German". In D. I. Slobin (ed.) 1985. The Cross-Linguistic Study of Language Acquisition. Hillsdale, N.J. Erlbaum.

Pfaff, Carol W. 1980a. "Incipient creolization in 'Gastarbeiterdeutsch'? An experimental sociolinguistic study". In Studies in Second Language Acquisition 3. 165-178.

---------- 1980b. "Acquisition and development of 'Gastarbeiterdeutsch' by migrant workers and their children in Germany". In E. Traugott et al. (eds.) Papers from the Fourth International Conference on Historical Linguistics. Amsterdam: John Benjamin B.V.

---------- 1981. "Sociolinguistic problems of immigrants:

Foreign workers and their children in Germany. Review Article. Language in Society 10.

---------- 1984a. "Input and residual transfer effects in Turkish and Greek children's German. In R. Andersen (ed.) Second Languages. 271-98

---------- "The development of language by Turkish/German bilingual children in Berlin". Paper presented at the 9th Annual Boston University Conference on Language Development.

---------- to appear. b. "Functional approaches to interlanguage". In C. Pfaff (ed.) Cross-Linguistic Studies of Language Acquisition. Processes. Rowley MA: Newbury House.

---------- ,Theda Borde & Dina Kohen (in prep.). Bericht EKMAUS Teilprojekt: Linguistische und kognitive Entwicklung: Die Beziehung zwischen Erst- und Zweitspracherwerb.

---------- & Renate Portz 1981. "Foreign children's acquisition of German: universals vs. interference". In Dittmar (ed.) Proceedings of the Second German-Scandinavian Conference on Migrant Language. Berlin Freie Universität.

Portz, Renate & Carol W. Pfaff 1981. SES-Soziolinguistisches Erhebungsinstrument zur Sprachentwicklung. Ein Instrument zur Beschreibung der Sprach- und Kommunikationsfähigkeit ausländischer Schüler in deutschen Schulen. Berlin: Pädagogisches Zentrum.